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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/824,570	04/03/2001	Christof Eberspacher	225/49834	8702

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EXAMINER

SAVAGE, JASON L

ART UNIT	PAPER NUMBER
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1775

DATE MAILED: 09/09/2002

13

Please find below and/or attached an Office communication concerning this application or proceeding.

ASB

Office Action Summary

Application N .

09/824,570

Applicant(s)

EBERSPACHER ET AL.

Examiner

Jason L. Savage

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 23 July 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4,5,16,18,20 and 22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4,5,16,18,20 and 22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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Specification

1. The incorporation of essential material in the specification by reference to a foreign application or patent on page 1 lines 1-3 or the specification is improper. Applicant is required to amend the disclosure to include the material incorporated by reference. The amendment must be accompanied by an affidavit or declaration executed by the applicant, or a practitioner representing the applicant, stating that the amendatory material consists of the same material incorporated by reference in the referencing application. See *In re Hawkins*, 486 F.2d 569, 179 USPQ 157 (CCPA 1973); *In re Hawkins*, 486 F.2d 579, 179 USPQ 163 (CCPA 1973); and *In re Hawkins*, 486 F.2d 577, 179 USPQ 167 (CCPA 1973).

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-2, 4-5, 16, 18, 20 and 22 are rejected under 35 U.S.C. 102(b) as being anticipated by Kawamura et al. (US 5,249,661).

Kawamura teaches a wear-resistant coating on a synchronizing ring formed by flame spraying (col. 2, ln. 24-28). The coating contains between 5-30% by weight of solid lubricating

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ceramic particles which may be oxides, carbides, or nitrides of elements such as Ti, Si, B, Al, Mn, Cu, Co, Ni, Na, Cr, W and V (col. 4, ln. 14-25). The porosity of the coating is between 5-30% (col. 51-60).

Regarding the limitation that the particle size be less than 180 μm , Kawamura teaches that the particle sizes prior to spraying are -150 mesh and -250 mesh which falls within applicant's claimed range. Furthermore, Kawamura teaches that the thickness of the coating is between 70 to 200 μm (col. 5, ln. 19-20). The particle size can not be larger than the thickness of the coating and therefore any coating having a thickness between 70-180 μm would inherently have a particle size within the claimed range.

Regarding claim 2, although Kawamura does not teach the specific solid lubricants which are claimed in the listing of the more specific types of particles which are envisioned (col. 4, ln. 18-24), it is the position of the Examiner that the teaching that the particles may be an oxide of an element such as Ti is a teaching that the lubricant is TiO_2 (col. 4, ln. 16-17).

Regarding claims 4 and 16, Kawamura teaches that the coating further includes a molybdenum alloy which may include elements such as Si and Ni (col. 3, ln. 56-59). Kawamura exemplifies that the molybdenum alloy contains Si and Ni (col. 5, ln. 67-68).

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4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kawamura (US 5,249,661).

Kawamura teaches what is set forth above but is silent to the specific solid lubricants which are claimed. Kawamura does teach that the solid lubricating ceramic particles which may be oxides, carbides, or nitrides of elements such as Ti, Si, B, Al, Mn, Cu, Co, Ni, Na, Cr, W and V (col. 4, ln. 14-25). It would have been obvious to one of ordinary skill in the art at the time of the invention to have selected an oxide of titanium or a nitride of boron as the lubricating particle since Kawamura states that they are suitable materials. Furthermore, absent a teaching of the criticality of the claimed materials such as hexagonal boron nitride, it does not provide a patentable distinction over the prior art.

Response to Arguments

6. Applicant's arguments with respect to claims 1-2, 4-5, 16, 18, 20 and 22 have been considered but are moot in view of the new ground(s) of rejection.

Applicant argues that Kawamura does not disclose a synchronizer ring comprising in addition to other elements specified a tribological coating containing a maximum of 40% by

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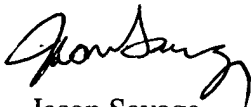
weight of a solid lubricant having a particle size of no more than approximately 180 μm . It is unclear as to exactly which element Applicant believes Kawamura is lacking, however in order for completeness, each element will be addressed. As for being a tribological coating, the coating Kawamura would be just as tribological since it contains all of the elements and materials which are claimed by Applicant. Regarding the issue of containing a maximum of 40% by weight of a solid lubricant, Kawamura teaches that the coating contain between 5-30% by weight of a ceramic particle which is clearly less than the 40% maximum claimed by Applicant. If Applicant intends that the ceramic particles are not the same as the solid lubricants which are being claimed, the rejections set forth above show that the ceramic particles may be an oxide of titanium and a nitride of boron which are the same as the lubricants which are claimed. Should Applicant be taking issue over the particle size limitation, Kawamura teaches that the particles are less the claimed size in the first embodiment in col. 5, line 67 - col. 6, line 2), furthermore, the coating thickness being limited between 70 - 200 μm would limit the maximum particle size. Therefore the coating on the synchronizer ring of Kawamura appears to teach each and every element which is claimed and thus rejections have been maintained.

7. Any inquiry to this communication or earlier communications from the Examiner should be directed to Jason Savage, whose telephone number is (703)305-0549. The Examiner can normally be reached Monday to Friday from 6:30 AM to 4:00 PM.

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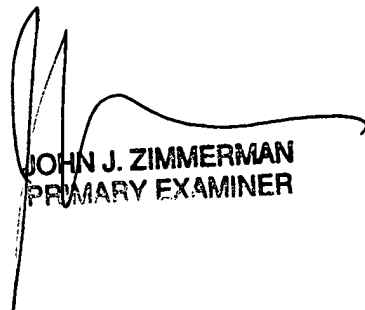
If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Deborah Jones, can be reached on (703)308-3822.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703)308-2351.



Jason Savage

8-20-02



JOHN J. ZIMMERMAN
PRIMARY EXAMINER